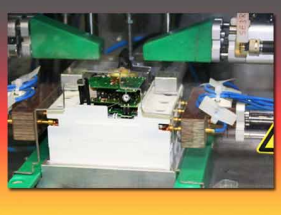
Doepke

# DRTconf

## Configuration Software
## for the Dupline DRT 2 Room Thermostat

## User Manual

**DRTconf Version 1.4x - Novmber 2009, Version 1.40**



# DRTconf

## Configuration Software
## for the Dupline DRT 2 Room Thermostat

## User Manual

**DRTconf Version 1.4x**

**Novmber 2009, Version 1.40**

**Registered Trademarks**

IBM and IBM PC are registered trademarks of the International Business Machines Corporation. Microsoft, MS-DOS and Windows are registered trademarks, and Windows NT, Windows 2000 and Windows XP are registered trademarks of the Microsoft Corporation.

**Liability**

All information contained in this document of Doepke Schaltgeräte GmbH & Co. KG is protected by copyright. The reproduction and processing, adapting and/or transfer against payment of such information is permissible only with the express written approval of Doepke Schaltgeräte GmbH & Co. KG.
The information in this manual is intended solely as customer information and does not constitute a binding guarantee or undertaking. It is subject to change at any time, be it in technical content or in financial/commercial terms. Binding statements can only be given following specific enquiries.
Being non-binding, no liability of any kind can be accepted for the accuracy of the information.
Using this document is solely at your own discretion. Doepke Schaltgeräte GmbH & Co. KG accepts no liability for any damages arising from the use of this document, in particular stoppage of operations, loss of earnings, loss of information or data or consequential damages, except in cases of compulsory liability, e.g. as provided under the Product Liability Law, or in cases of premeditation, gross negligence, absence of promised capabilities or because of infringement of fundamental contractual obligations. Compensation for infringement of fundamental contractual obligations shall, however, be limited to contract-typical, foreseeable damage, provided there is no premeditation or gross negligence.

Copyright © 2009 by Doepke Schaltgeräte GmbH & Co. KG

# Table of Contents

## Chapter 1 - Introduction

1.1 What is DRTconf? ... 1
1.2 About this document ... 1
1.3 Conventions ... 1
1.4 Abbreviations and Terminology ... 2
1.5 Documents Used ... 2

## Chapter 2 - Quick Start

2.1 Start Simply - Step by Step to Creating your own DRT 2 Configuration ... 3
2.1.1 Starting DRTconf ... 3
2.1.2 The User Interface ... 3
2.1.3 Selecting the Programme Language ... 3
2.1.4 Display Settings ... 4
2.1.4.1 Basic Settings ... 4
2.1.4.2 Controller Functions ... 4
2.1.5 Configure the Room Thermostat ... 4
2.1.5.1 General ... 4
2.1.5.2 Configuring Thermostat Channels (Objects) ... 5
2.1.5.3 Programmes in „Controller“ Operating Mode ... 6
2.1.5.4 Programmes in „Terminal“ Operating Mode ... 7
2.1.6 Configuring Dupline Channels ... 8
2.1.6.1 Digital Channels (Switching/Shutter Channels) ... 8
2.1.6.2 Analog Channels ... 8
2.1.7 Transferring the Configuration ... 8
2.1.8 Saving the Configuration ... 9

## Chapter 3 - Operation

3.1 General Information ... 10
3.2 Retrieving and Exiting ... 10
3.2.1 Starting ... 10
3.2.2 Programme Construction ... 11
3.2.3 Exit ... 11
3.3 The Help System ... 12
3.3.1 Help to DRTconf ... 12
3.3.2 Info ... 12
3.3.3 Help Texts (Hints) ... 12
3.4 Files ... 13
3.4.1 Starting a new File ... 13
3.4.2 Opening an Existing File ... 13
3.4.3 Saving Files ... 13
3.4.4 Printing Files ... 14
3.4.5 Displaying File Properties ... 14
3.5 Formatting Text ... 15
3.5.1 General Information ... 15
3.5.2 Cutting ... 15
3.5.3 Copying ... 15

3.5.4 Pasting ..... 15
3.5.5 Align Left ..... 15
3.5.6 Center ..... 16
3.5.7 Align Right ..... 16
3.6 Configuring the Objects ..... 17
3.6.1 General Information ..... 17
3.6.2 Creating a Channel ..... 17
3.6.3 Configuration of Dupline Channels ..... 18
3.6.3.1 Digital Value ..... 18
3.6.3.2 AnaLink Value ..... 20
3.6.3.3 Descriptive / Status Text in Display ..... 21
3.6.4 Deleting a Channel ..... 22
3.6.5 Moving Channels ..... 23
3.7 Reading Device Info, Reading and Writing a Configuration ..... 24
3.7.1 General Information ..... 24
3.7.2 Reading Device Info ..... 24
3.7.3 Reading the Configuration ..... 24
3.7.4 Writing the Configuration ..... 25

**Chapter 4 - Settings**

4.1 Display Settings ..... 26
4.1.1 Basic Settings ..... 26
4.1.2 Controller Functions ..... 28
4.2 Programme Settings ..... 29
4.2.1 Selecting the Language ..... 29
4.2.2 Setting Up the Communication Port ..... 30

**Appendix A: Configuration System ..... 32**

**Index ..... i**

# Chapter 1 Introduction

## 1.1 What is DRTconf?

DRTconf is the configuration software for the Dupline® DRT 2 room thermostat. Its use will make child's play of providing, downloading and, if required, retrospectively changing the application for the Windows®. DRTconf was designed with the aim of providing a tool which is as simple and easy to use as possible - in just the same way as is already the case with ProLine and ProLine$^{NG}$.
Since in the meantime there exist different versions of DRTconf, please observe that only certain versions are compatible to the DRT 2:

| DRT 2 Version | DRTconf Version |
|---|---|
| up to 1.01 | 1.00 |
| 1.10 to 1.12 | 1.10 |
| from 1.20 | 1.20 |
| from 1.30 | 1.30 or 1.40 |

In addition, DRTconf also has following system requirements:

| | Requirements |
|---|---|
| PC | • IBM compatible PC, minimum Pentium processor<br>• 256 MB RAM minimum, 20 MB free hard disk space minimum<br>• mouse<br>• 1 free serial port (COM1, COM2, COM3 or COM4) |
| Monitor | • resolution 640 x 480 Pixel minimum, 256 colours minimum |
| Operating system | • Microsoft Windows® 2000/XP |

## 1.2 About this document

This document is a manual and on-line aid combined. It provides information on the capabilities of the room thermostat and explains the functions of the configuration software.
To ensure that the manual is always up-to-date Doepke will assist you in every way: please make use of our telephone support service, our email update service or the information available at http://www.doepke.de/uk to be kept informed of all the latest developments.

## 1.3 Conventions

For reasons of clarity and ease of reading, here are some set markings relating to working with Windows®. As far as possible these conventions are adhered to throughout the document.

| | |
|---|---|
| **Start** | Over and underlined terms signify special keys or menu items (also called "buttons"). You will find these either in Windows® or ProLine. |
| *„a:setup“* | Text shown in inverted commas, printed in bold or italics, describes what has to be entered. The inverted commas merely serve as text limit markers and do not need to be entered. |
| ***<File><Save>*** | Text set in greater than/smaller than symbols, printed in bold or italics, describes those menu items or menu sequences that are necessary. The specified commands generally signify multi-level menu items. |

## 1.4 Abbreviations and Terminology

| Abbreviation | Description |
|---|---|
| Checkbox | Box within a dialogue field which may be ticked (activated) or deselected (de-activated). Several checkboxes can be activated simultaneously. See also radiobutton |
| COM1/COM2/ COM3/COM4 | Communication Port: Plug-in connectors on the PC which enable itton be linked to other communication partners. |
| Cursor | Marker (pointer or similar) on the screen showing at which point the next input will be. |
| FPROM | Flash Programmable Read-Only Memory:<br>Memory module which, with the application of a voltage, is permanently programmed with data |
| Icon | Graphic symbol for user programmes, data etc. on the screen. |
| LCD | Liquid Crystal Display |
| LED | Light Emitting Diode: A semiconductor diode which emits light. |
| Object | Denotes in this document a function, i.e. the execution by the software of an input or output, e.g. a shutter control.<br>In ProLine many devices have a specific object assigned to them in order to enable settings to be made which are decisive for the functioning of the device. |
| PIN | **P**ersonal **I**dentifikation **N**umber: In this case a 4-digit number to disable the access to the system menu or switching digital channels. |
| ProLine | Configuration programme for channel generators DKG 1 and DKG 2. |
| ProLine$^{NG}$ | Configuration programme for channel generators DKG 20 and DKG 21-GSM. In this document the terms ProLine and ProLine$^{NG}$ always refer to the ProLine$^{NG}$ version for the new DKGs. |
| Radiobutton | For the selection of several activating fields only one of which can be called up at any one time. |

## 1.5 Documents Used

| Reference | Description | Order No. |
|---|---|---|
| [1] | Dupline<br>Product Information and Planning Aid | 5 900 082 |
| [2] | ProLine User Manual | 5 900 126 |
| [3] | ProLine$^{NG}$ User Manual | 5 900 142 |
| [4] | DRT 2 Operating Instructions | 3931272 |

# Chapter 2 Quick Start

## 2.1 Start Simply - Step by Step to Creating your own DRT 2 Configuration

In this chapter we want to provide you with an easy introduction to DRTconf by explaining in simple-to-follow steps the configuration procedure. For each of these steps there is detailed information provided in the following main chapters to which you can refer if necessary.

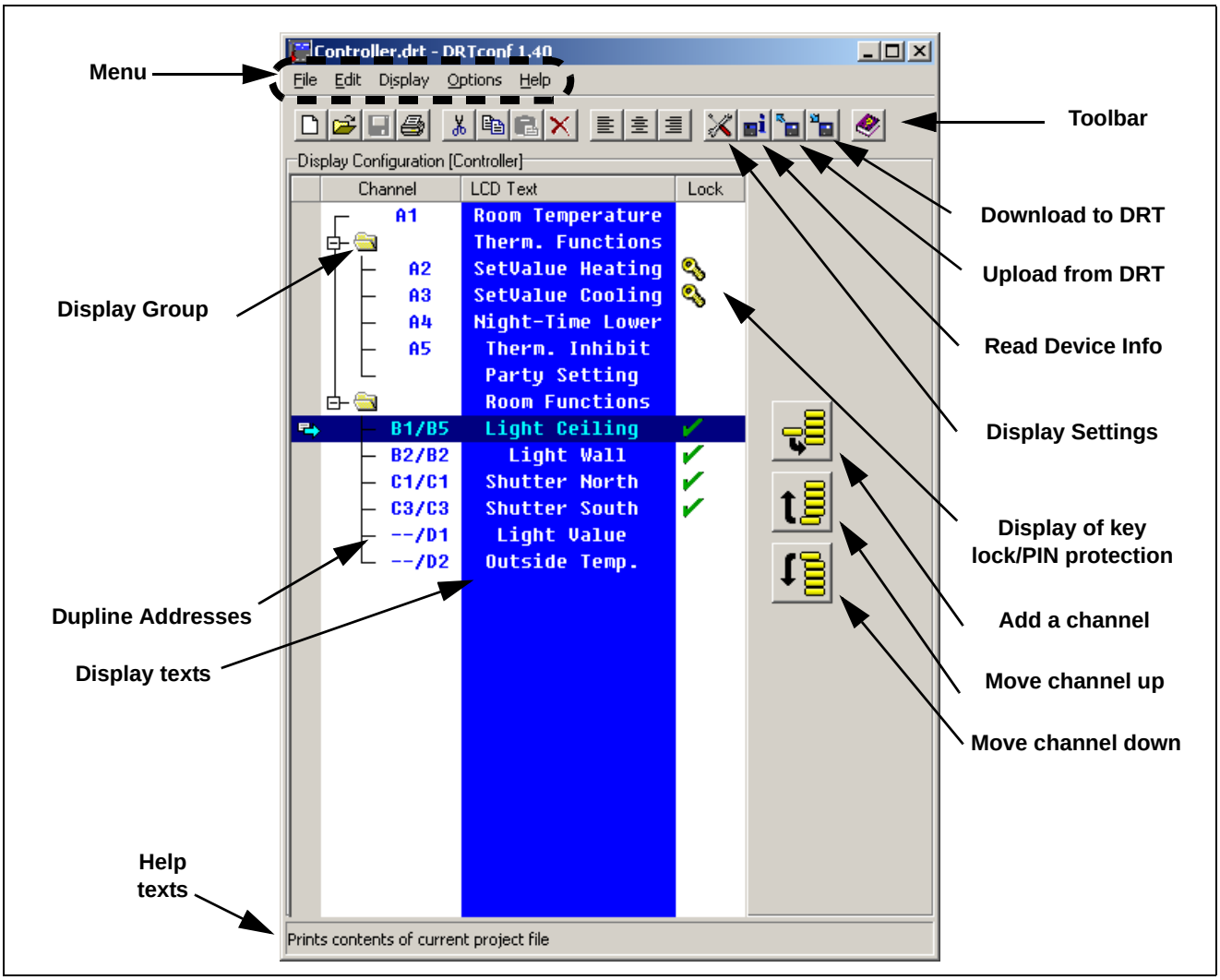
Have fun!

### 2.1.1 Starting DRTconf

Once installation has been successfully accomplished the programme can be started. The link-up to the programme can be found in the Windows menu under ***<Start><Programs><Doepke Schaltgeräte>***<DRTconf>***.***

### 2.1.2 The User Interface

The following illustration presents the programme user interface with a loaded configuration file which already contains the most important functions:




### 2.1.3 Selecting the Programme Language

If the programme language in which DRTconf has been started is not the right one, you can always

change it in the ***<Options><Language>*** menu.

### 2.1.4 Display Settings

It is important to establish the correct settings for the DRT 2 at the start, as these will directly affect its subsequent operation and function.

#### 2.1.4.1 Basic Settings

| | Menu | Keyboard |
|---|---|---|
| | ***<Display><Settings><Basic Settings>*** | **Alt+Ctrl+S** |

1. If you wish, you can enter general information relating to the text display in the ***<Project Description>*** box. This may help you later to identify the installation site or the application in addition to the file name.
2. Now decide upon the operating mode of the ***<Background Light>***: it is often advisable for this to be illuminated for a short time when a key is pressed, so that the text can be read even in darkness.
3. Select the ***<Language>*** of the DRT system menu - for English-speaking countries this would normally be the standard "English".
4. If you want to protect the display against accidental or unauthorized operation, e.g. by children, either select the ***<Pressing 2 Keys>*** option or force the input a PIN by means of the option ***<PIN>*** in the field „Key Lock“.
   In both cases it is necessary to switch on the key lock at each single object (e.g. Dupline channels) which is to be locked.
5. Exit the dialogue with ***<OK>***.

#### 2.1.4.2 Controller Functions

| | Menu | Keyboard |
|---|---|---|
| | ***<Display><Settings><Controller Functions>*** | **Alt+Ctrl+S** |

1. Specify here in which operating mode the DRT shall work: Controller or Terminal. The most common case of operation will be the „Controller“, since he controls the temperature of the room on his own. If you selected „Controller“ the setting of items 3 and 4 is not available.
2. In the field „Temperature Calibration“ you may eventually compensate an offset caused by the temperature measurement of the DRT. Most likely the measured value is higher than effective room temperature value due to the intrinsic heating by flush-mounted fitting.
3. In the field „Frost/Heat Protection“ you may specify the limits for the automatic protection against overheating or frost.
4. In the field „Controller Reset“ enter a Dupline address to give the possibility of a reset via the Dupline bus to the default values which may have been changed manually at the DRT.

### 2.1.5 Configure the Room Thermostat

#### 2.1.5.1 General

But now to the most important task that you can perform DRTconf: The configuration of the thermostat

function.Therefor, some so-called „temperature programmes“ are at your disposal, which you may insert on two ways:

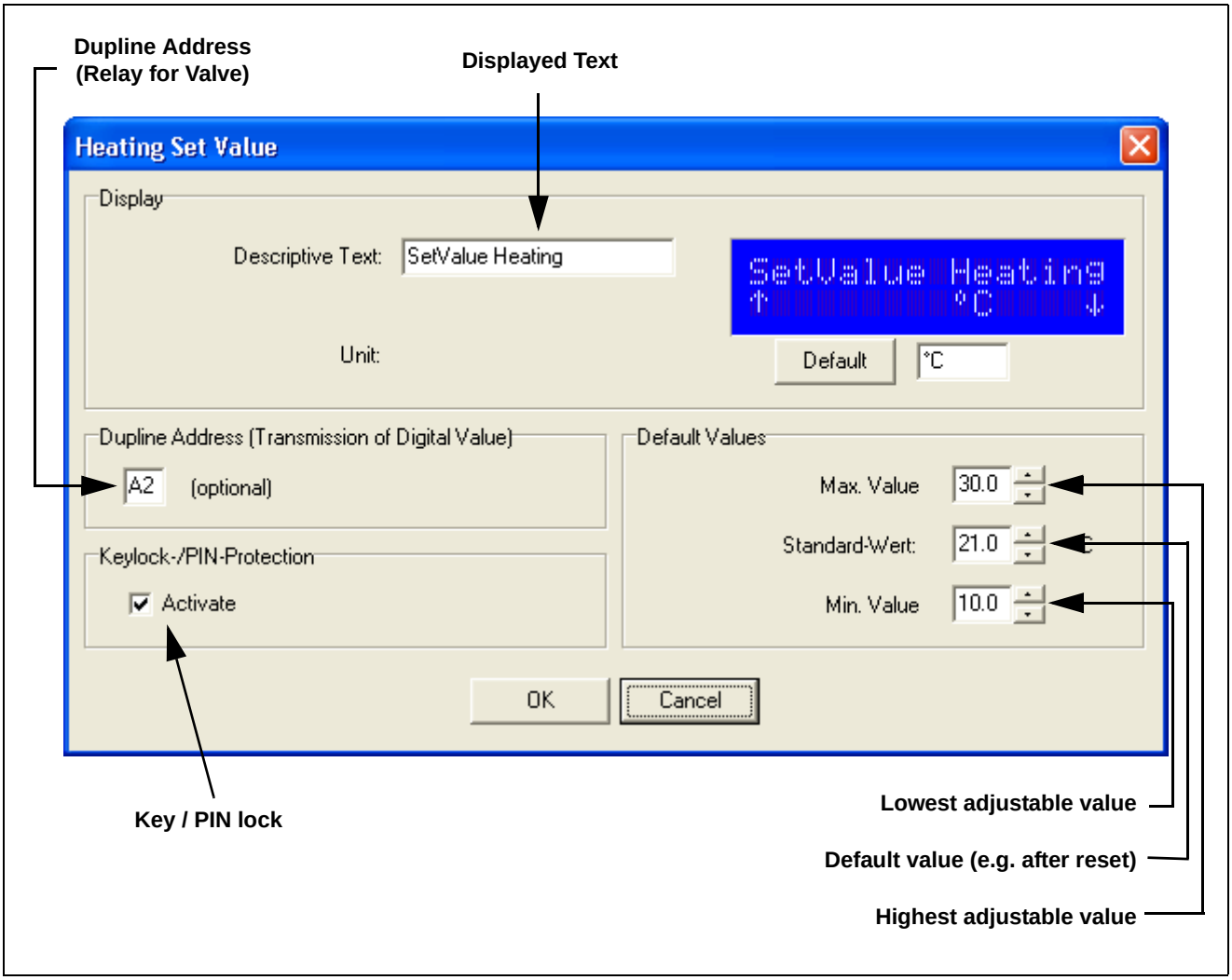
a. By inserting with the right mouse button („Add“)

b. By the command

*Note:* Not always all programmes are available: The availability depends on the place where you try to insert the programme and if it already has been utilized (many programmes may only be configured once).

### 2.1.5.2 Configuring Thermostat Channels (Objects)

To configure the DRT to be a thermostat you require one of the programmes „Heating Setpoint“ or „Cooling Setpoint“ in any case. The configuration is similar for both programmes:




The following programmes are available:

### 2.1.5.3 Programmes in „Controller“ Operating Mode

| Actual Value - Room Temperature | |
|---|---|
| Description | Current measurement of the room temperature as used by the DRT 2 to regulate same. If this object has not been configured the automatic control will process this value internally. |
| Range of values | 0..45°C |
| Address | A1..P8<br>Transmitted analogue (AnaLink®) data, measuring range 0..45°C |
| ProLine object | Analogue sensors \| temperature sensor<br>Measuring range 0..45ºC |
| **Set Value "Heating"** | |
| Description | Desired minimum temperature (heating value). |
| Setting range | 10..30°C |
| Address | A1..P8<br>Transmitted digital data ("Heating unit" On/Off) |
| ProLine object | Push-button function for operating a heating unit |
| Remarks | Must be 2 K (ºC) below the „Cooling set value“. |
| **Set Value "Cooling"** | |
| Description | Desired maximum temperature (cooling value). |
| Setting range | 10..40ºC, manually at the device |
| Address | A1..P8<br>Transmitted digital data ("Cooling unit" On/Off) |
| ProLine object | Push-button function for operating a cooling unit |
| Remarks | Must be 2 K (ºC) above the “Heating set value“ |
| **Thermostat Inhibit** | |
| Description | Stops the internal processing of the automatic control and results in the deactivation of all switching channels that may have been set. |
| Setting range | On / Off, manually at the device or via the Dupline bus |
| Address | A1..P8<br>Received digital data (thermostat inhibit On/Off) |
| ProLine object | Push-button function |
| Remarks | Priority above all other operating modes (inc. manual thermostat inhibit);<br>Deactivates the frost/heat protection. |
| **Night-Time Lowering** | |
| Description | Enables a manually selected, or Dupline controlled, reduction in the room temperature (heating mode) or increase in the room temperature (cooling mode) by a configurable value. |
| Setting range | Lowering value: 1..10 K (ºC)<br>Status: On/Off (manually at the device or via the Dupline bus) |
| Address | A1..P8<br>Received digital data (thermostat inhibit On/Off) |
| ProLine object | Push-button function, time switch or similar. |

| | |
|---|---|
| Remarks | A manual, temporary disabling of the lowering can be achieved via the party setting;<br>A manually activated lowering of the temperature will be overridden by the next command for switch-off via Dupline. |
| **Comfort (Party) Setting** | |
| Description | Enables a Dupline controlled command for night-time lowering to be temporarily invalidated so that the room temperature corresponds to the selected set value. |
| Setting range | 0.5..5 hours / Off / On |
| Address | none |
| ProLine object | Push-button function, time switch or similar. |
| Remarks | If, after expiration of the set time, a command for lowering via Dupline is still pending, then this will be executed. |

### 2.1.5.4 Programmes in „Terminal“ Operating Mode

| | |
|---|---|
| **Actual Value - Room Temperature** | |
| Description | Current measurement of the room temperature that is required by a superset control facility for regulating the temperature. |
| Range of values | 0..45°C |
| Address | A1..P8<br>Transmitted analogue (AnaLink®) data, measuring range 0..45°C |
| ProLine object | Analogue sensors \| temperature sensor<br>Measuring range 0..45ºC |
| Remarks | Has to be configured. |
| **Set Value "Heating"** | |
| Description | Desired minimum temperature (heating value) which is transmitted to the superset control facility. |
| Setting range | 10..30°C |
| Address | A1..P8<br>Transmitted analogue (AnaLink®) data, measuring range -30..60°C |
| ProLine object | Analogue sensors \| temperature sensor,<br>Measuring range 0..45ºC |
| Remarks | Must be 2 K (ºC) below the „Cooling set value“. |
| **Set Value "Cooling"** | |
| Description | Desired maximum temperature (cooling value) which is transmitted to the superset control facility. |
| Setting range | 10..40°C |
| Adresse | A1..P8<br>Transmitted analogue (AnaLink®) data, measuring range -30..60ºC |
| ProLine object | Analogue sensors \| temperature sensor,<br>Measuring range 0..45ºC |
| Description | Must be 2 K (ºC) above the „Heating set value“. |

### 2.1.6 Configuring Dupline Channels

In addition to the thermostat programmes you can basically configure up to 16 Dupline channels, whereby the sequence of configuration is initially of no consequence (you can specify this later by simply moving them.

The creation of those channels is done as described in **chapter 2.1.5.1 on page 4** by insertion of the „Dupline Channel“ object. Then configure the channel by proceeding in the following steps:

#### 2.1.6.1 Digital Channels (Switching/Shutter Channels)

1. For the type of representation select ***<Digital value>*** on page ***<Basic Settings>***.
2. In field ***<Dupline Address>*** set the address of the channel to be displayed.
3. Specify the function:
   - Select ***<Switching channel>*** for push-button, toggle functions or similar.
   - Select ***<Shutter/ Shutter Master>*** if it is a shutter control or a shutter master control. With this setting DRTconf will automatically block the next channel, as both the Up and Down channels are operated under the uneven address.
   - You should therefore answer "OK" to the question asking whether the next channel is to be deleted.
4. If the digital channel is to be operational then tick the ***<Unlocked>*** option as operation type.
5. Now switch to the page ***<Display Settings>***.
6. Now enter the ***<Descriptive Text>*** which is to be displayed. The embedded display shows how the text will look.
7. Then specify the ***<Status Text>*** for the channel status:
   - In the case of switching channels this is normally "On" or "Off"; with shutter control objects it is "Up" or "Down".
   - Tip: By activating the ***<Default>*** button the above data will be set automatically.
8. Finished!

#### 2.1.6.2 Analog Channels

1. In the case of an analog channel (temperature or light level sensor) select ***<AnaLink Value>*** as the type of representation.
2. Specify the function as follows:
   - Enter the minimum and maximum values in the ***<Sensor Input Range>*** boxes;
   - Select ***<Light Level Function>*** if it concerns the analog value of a DLUX (in which case the light level range will automatically be set).
3. Now switch to the page ***<Display Settings>***.
4. Now enter the ***<Descriptive Text>*** to be displayed. The embedded display shows you how the text will look.
5. Then specify in the ***<Status Text>*** box the unit to be displayed:
   - With analog data this is normally either "ºC" or "Lux".
   - Tip: By activating the ***<Default>*** button the above data will be set automatically.
6. Finished!

### 2.1.7 Transferring the Configuration

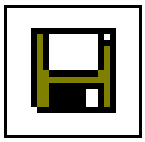
Once all required channels have been configured the complete application can be transferred:

1. Proceed via the ***<Options><Communication>*** to switch on the PC connection (COM port), which is linked to the DRT 2 via the DKK 1 serial cable.

2. For the transfer select the command ***<Display><Download>*** in the menu and press this button:

### 2.1.8 Saving the Configuration

Last of all, you should now save your work so that you may change it later or use it for other projects. For this purpose select ***<File><Save ...>*** or ***<File><Save as ...>*** or press this button



# Chapter 3 Operation

## 3.1 General Information

With DRTconf a user interface has been created which, while kept deliberately simple, at the same time offers all possible options for configuring the DRT 2.

The main features of DRTconf are

- little menu depth,
- efficient shortcut keys, and
- Help functions.

To summarize: DRTconf can be called an easy-to-operate "tool" - and, as with any tool, it is necessary to learn how to operate it. This chapter is designed to support you in this task.

## 3.2 Retrieving and Exiting

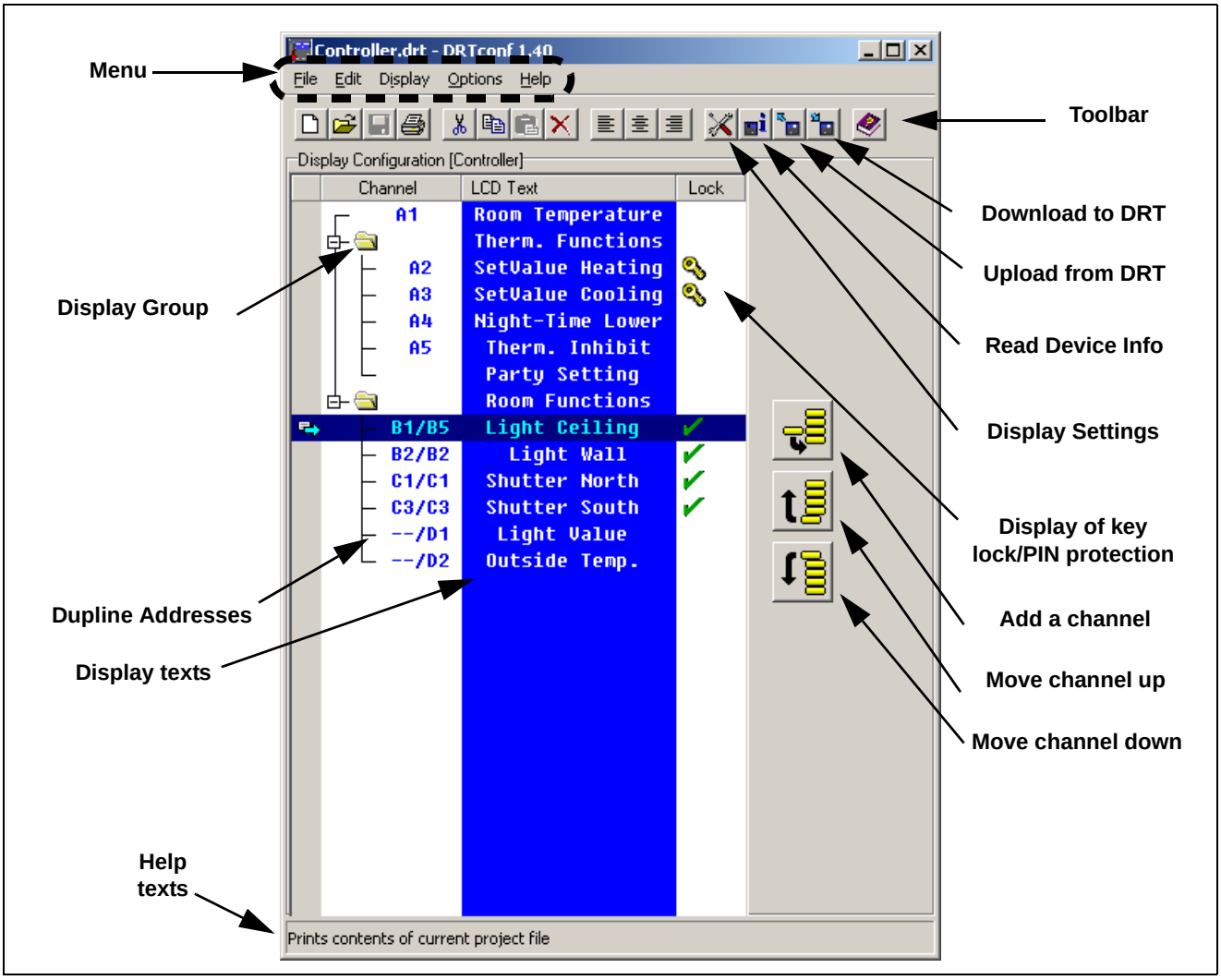
### 3.2.1 Starting

After the successful installation you will see in the Windows® start-up menu below the ***<Start><Programmes><Doepke Schaltgeraete><***DRTconf**>** the icon for DRTconf, which looks as follows:

Click with the mouse on this entry or select it with the keyboard and DRTconf will start.

### 3.2.2 Programme Construction

Having started DRTconf, you are straight away in the configuration dialogue window. The following illustration represents the construction in principle with a loaded configuration file:




The **menu** enables you to access the general functions of the programme, e.g. opening and saving files. Here you can also enter the settings for the display and the language.

The **toolbar** makes many functions directly available by clicking on them with the mouse; this will save you a lot of time when editing.

The **status** line at the bottom edge of the programme dialogue window is extremely informative: here brief **help texts** will be displayed.

### 3.2.3 Exit

| | Menu | Keyboard |
|---|---|---|
| | ***<File><Exit>*** | **Alt+F4** |

There are three ways of exiting from DRTconf:

1. By using the menu sequence ***<File><Exit>***,
2. By clicking on the "X" in the upper-right hand corner of the **left** programme window, or

3. By using the shortcut keys **Alt+F4**

It is immaterial which way you choose, in each case you will be asked whether you want to save any changes made to the configuration data before you exit.

## 3.3 The Help System

The help system makes itself "noticeable" at two points within the configuration programme:

- In the Help menu (***<Help><Help to*** DRTconf**>**), and
- As a brief help text ("hint") available for each setting option.

### 3.3.1 Help to DRTconf

| | Menu | Keyboard |
|---|---|---|
| | ***<Help><Help to DRTconf>*** | **F1** |

Selecting this menu item will open this file as a help file. It reflects the contents of the manual for DRTconf which is supplied with the software-package in the form of a PDF file and is available for downloading - always in its most current version - on the Internet at http://www.doepke.de/uk.

### 3.3.2 Info

| | Menu | Keyboard |
|---|---|---|
| | ***<Help><Info>*** | |

For information about this software select the entry ***<Help><About>*** in the menu. Here you will find the programme version used, together with information about ourselves, the firm of Doepke Schaltgeräte GmbH & Co KG.

### 3.3.3 Help Texts (Hints)

You can find help texts, so-called "hints", for every available setting possibility if you "swipe" the mouse over it. These hints are normally shown in yellow and appear in the status line.

## 3.4 Files

DRTconf normally opens and saves files with the ending "drt". Such files can be opened, saved and stored under a new name in the ***<File>*** menu.

### 3.4.1 Starting a new File

| | Menu | Keyboard |
|---|---|---|
| | ***<File><New>*** | **Ctrl+N** |

With the command ***<File><New>*** you can start a completely new application at any time. DRTconf then proceeds as follows:

- If a new configuration had previously been started, or an opened file been changed, it offers the option of saving these data.
- It then deletes all objects (headers, temperature programmes and Dupline channels).
- It deletes the settings for the DRT 2 (with the exception of the selected menu language, see **Chapter 4.1 "Display Settings"** on **Page 26**).
- This will not affect the programme options, such as e.g. the selected serial port.

*Note:* DRTconf assigns to a new file a name dependent upon those files which already exist in the route in which the file last opened or saved is located. It normally assigns new files the name "unknownxx.drt" whereby xx represents a unique number.
Example: You have already saved two files in the memory named "unknown1.drt" and "unknown2.drt" respectively. If you click ***<File><New>*** DRTconf will then generate the file name "unknown3.drt" thereby preventing accidental overwriting/replacing.

### 3.4.2 Opening an Existing File

| | Menu | Keyboard |
|---|---|---|
| | ***<File><Open>*** | **Ctrl+O** |

As in many of the other Windows® applications you can retrieve an existing file in of various ways:

- Via the command ***<File><Open>***: A dialogue will then appear via which you can navigate on your hard disk.
- Via the "history" in the ***<File><Recent File(s)>*** menu: here up to 9 of the files last opened will be shown and can be selected directly.
- By means of the "drag-and-drop" method: By pulling a DRT file from e.g. the workstation to the programme area you are instructing DRTconf to open this file. However, you must always ensure that that you are dealing with a DRT configuration file.

### 3.4.3 Saving Files

| | Menu | Keyboard |
|---|---|---|
| | ***<File><Save>***<br>***<File><Save as...>*** | **Ctrl+S** |

With the ***<File><Save>*** menu item you can save new and modified applications on hard disk or floppy. If this file already exists it will be overwritten; if it is a new file you will be asked for a file name.

The ***<File><Save as...>*** menu item however enables you to save the current application under another

name. So, here too, you will be asked to specify a file name.

### 3.4.4 Printing Files

| | Menu | Keyboard |
|---|---|---|
| | ***<File><Print...>*** | **Ctrl+P** |

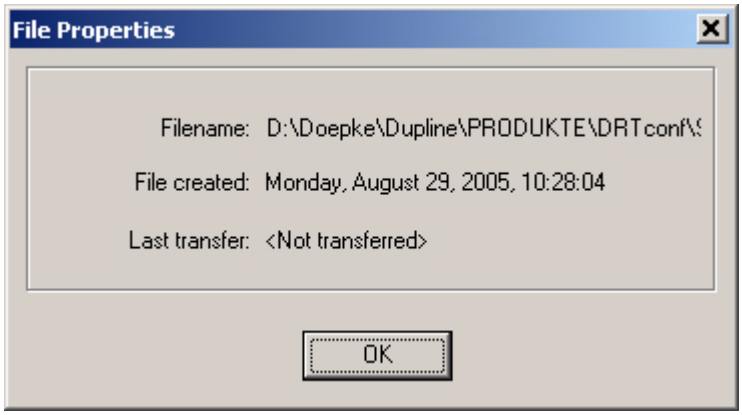
With the ***<File><Print...>*** menu item you can output the configuration data currently edited on a printer. The dialog which appears on selection of this menu item conforms to the standard in Windows® applications. However, the dialog may vary dependent on the selected printer's functions.

*Note:* The dialog's page indications refer to the configured display channels with their order of appearance, they not refer to the printed pages of paper.

### 3.4.5 Displaying File Properties

| | Menu | Keyboard |
|---|---|---|
| | ***<File><Properties>*** | |

The ***<File><Properties>*** menu item offers information about the configuration file currently edited:




Following information is available:

**Filename:**
Designation and path of the file opened. You can scroll the text by clicking into the field if the path is longer than the displayable text.

**File created:**
Date and time of file creation. This value is stored in the DRT.

**Last transfer:**
Date and time of the last transfer to DRT. This value is updated on each transfer and is stored in the file as well as in the DRT.

## 3.5 Formatting Text

### 3.5.1 General Information

For the purpose of formatting texts in the text input boxes, such as e.g. descriptive text, DRTconf provides some useful functions. The prerequisite for the availability of these functions is, however, that the cursor is located in such a box, i.e. that you have clicked with the mouse in such a box, or that you have jumped there with the Tab key.

The display permits input of some special characters:

- The umlauts: "ä", "ö", "ü", "Ä", "Ö", "Ü"
- The German sharp s: "ß"
- Special units: "º", "%" and "?".

Entering other special characters may result in an incorrect representation in DRT, even if these are shown correctly in the preview in DRTconf.

### 3.5.2 Cutting

| | Menu | Keyboard |
|---|---|---|
| | ***<Edit><Cut>*** | **Ctrl+X** |

With this command you will cut out and at the same time copy the selected text; you can later insert it e.g. in another box.

### 3.5.3 Copying

| | Menu | Keyboard |
|---|---|---|
| | ***<Edit><Copy>*** | **Ctrl+C** |

With this command you will copy the currently selected text; you can later insert it e.g. in another box.

### 3.5.4 Pasting

| | Menu | Keyboard |
|---|---|---|
| | ***<Edit><Paste>*** | **Ctrl+V** |

With this command you can insert a previously copied text. Such text may originate from another box or from e.g. a word processing programme. Text once copied or cut may be inserted as often as required.

### 3.5.5 Align Left

| | Menu | Keyboard |
|---|---|---|
| | ***<Edit><Align Left>*** | **Ctrl+L** |

With this command you will left align the text in a box. All texts are normally left aligned in DRTconf when first entered. However, if you have employed one of the instructions "Center" or "Align Right" you can always revoke them with this command.

*Note:* It is only possible to left align if the length of the entered text is shorter than the maximum number of characters of the text box in question.

### 3.5.6 Center

| | Menu | Keyboard |
|---|---|---|
| | ***<Edit><Center>*** | **Ctrl+M** |

With this command you will centre the text in a box. This command is particularly helpful if texts are to be centrally positioned in the display.

*Note:* The same spacing right and left can only be achieved if the text consists of an even number of characters as the input boxes are also designed for an even number. If the text to be centred has an uneven number of characters, it will be aligned with one character shifted to the left.

### 3.5.7 Align Right

| | Menu | Keyboard |
|---|---|---|
| | ***<Edit><Align Right>*** | **Ctrl+R** |

With this command you will right align the text in the text box.

*Note:* It is only possible to right align if the length of the entered text is shorter than the maximum number of characters of the text box concerned.

## 3.6 Configuring the Objects

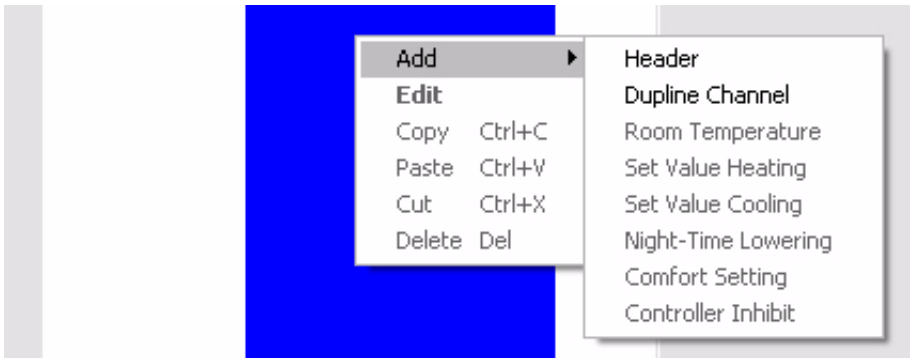
### 3.6.1 General Information

With the aid of DRTconf you can represent Submenus, temperature programmes and up to 16 Dupline channels which generally means a sufficient number.

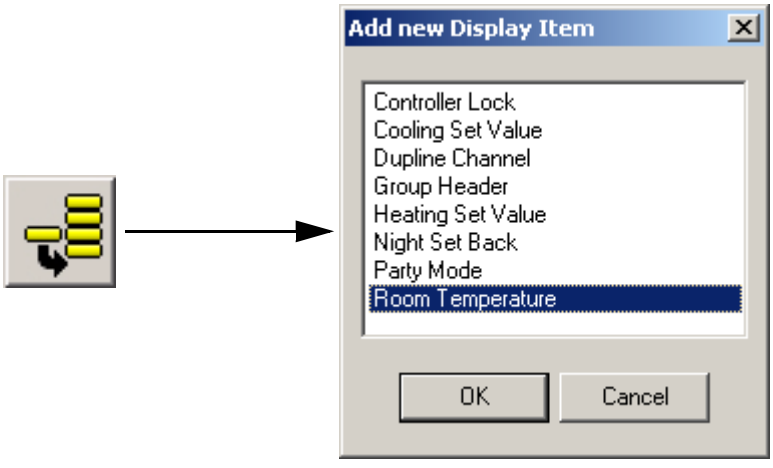
### 3.6.2 Creating a Channel

The creation of an object either might be done by clicking the right mouse button in the „Display Configuration“ field (e.g. ***<Add><Dupline Channel>***) or by pushing the button „Add Channel“ respectively the menu item ***<Edit><Add>***;

| **Insert a channel:** | **By clicking right mouse button** |
|---|---|




| **Insert a channel:** | **By clicking „Add a channel“ button / *<Edit><Add>* menu item** |
|---|---|

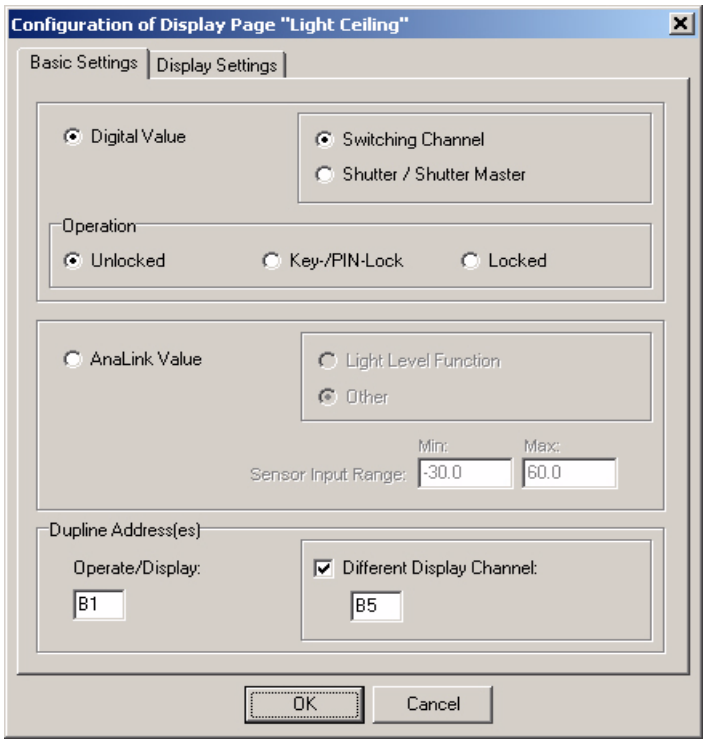


### 3.6.3 Configuration of Dupline Channels

After creation of a Dupline channel with the alternatives described above, you may configure this one by double clicking on the element.

#### 3.6.3.1 Digital Value

| Digital Value: | Basic Settings | |
|---|---|---|




If you are using the channel to be configured as a digital value channel, you have the following options:

***Switching Channel***

The channel is a normal switching channel. This setting can be used for all Dupline switching channels - with the exception of shutter control objects - i.e. for push-button functions, toggle-switch functions, timers, alarm objects etc.

In the case of channels which are not user operated, e.g. an alarm signal, then only the status which you have configured will be displayed. Please refer to **Appendix A - Configuration System**.

***Shutter/Shutter Master***

This channel is a shutter control channel. If you are configuring a channel as a shutter control channel, DRTconf will automatically link it to the next channel. Shutter control channels always start with an uneven address (A1, A5 ...) for the "Up" command, and the follow-on address (A2, A6 ...) is always the "Down" command. In order to avoid unnecessary leafing through the pages in DRT 2, both channels are combined by DRTconf, so that "Up" can be controlled by the left middle button and "Down" by the right middle button.

Please note that the status shown with shutter objects is only valid while the Up or Down command is being carried out.

***Operation***

Irrespective of the type of channel involved, you have the option to define the type of operation:

| Operation | |
|---|---|
| ***<Unlocked>*** | Generally the channel can be operated, even if the lock has been activated in the „Display Settings“. |
| ***<Key/PIN-Lock>*** | With this setting the preset in „Display Settings“ is important: If there a key lock has been specified, this also has to be performed when a channel shall be operated; the same applies to the PIN lock. |
| ***<Locked>*** | Independent from the „Display Settings“ the configured channel never can be operated. |

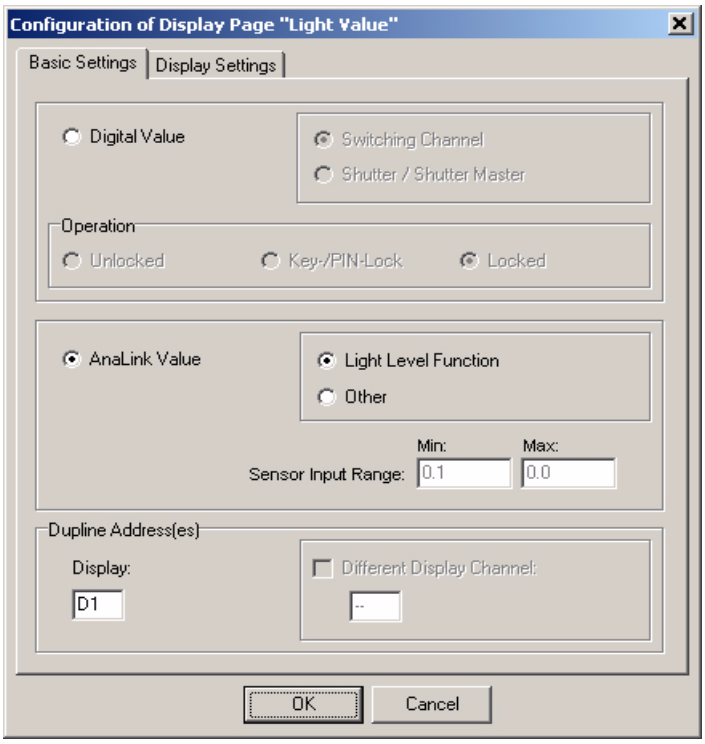
***Dupline Address***

Here you determine which Dupline address shall be switched and which address shall be displayed. In each case the address range lies between A1 and P8.

| Addresses | |
|---|---|
| ***<Operate/Display>*** | Insert here the channel address that shall be operated in case of pressing the push button at the DRT.<br>The DRT will show the status of this channel unless the option ***<Different Display Channel>*** has been selected.<br>*Note:*<br>Whether or not the channel can be influenced depends upon its configuration in the channel generator. Refer to **Appendix A - Configuration System** to see which channels can be influenced. |
| ***<Other Display Address>*** | If you choose this option you may specify a channel address in the field below which status will be displayed instead of the address specified in the field ***<Operate/Display>***.<br>This for example is reasonnable when using dimmers on which the manipulation generally is done on a different channel than the acknowledgement. |

### 3.6.3.2 AnaLink Value

| AnaLink Value: | Basic Settings |
|---|---|




If you are using the channel to be configured as an AnaLink value channel, you have the following options:

***Light Level Function***

This channel is used for transmitting light level data. When this option is selected DRTconf will automatically insert the correct limit values for the input range.

*Note:* Always select "Light Level Function" and not the option "Other" for the light level sensor. The light level value cannot be linear-computed and the wrong data would thus be displayed by the DRT, if the setting "Other" were chosen.

***Other***

You have configured this channel for the transmission of AnaLink data which are not light level values. The former include e.g. temperature sensors or general sensor values which are fed into the system via standard input modules (0...10 V, 4...20 mA).

In such cases please also enter the relevant sensor input range so that the data can be correctly scaled by the DRT.

***Sensor Input Range***

The sensor input range serves as the basis for scaling and displaying analog data by the DRT. Here you should enter the same data as you also use in ProLine - they equate to the sensor's measuring range. If you are using e.g. a temperature sensor with a measuring range of -10ºC to +100ºC then these figures must also be entered in the “Min“ and “Max.“boxes.

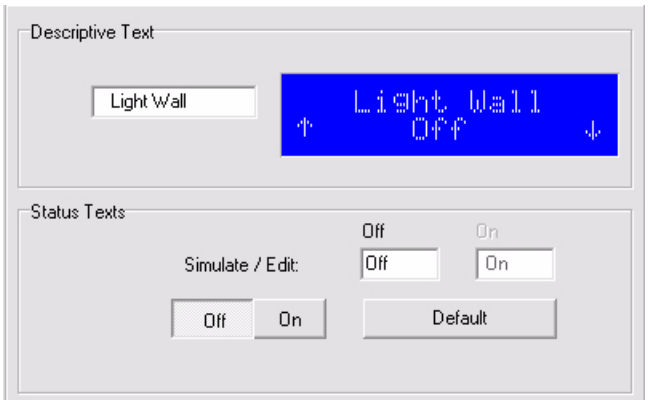
***Dupline Address***

Here you determine on which Dupline address the analog value is transmitted. The address range lies between A1 and P8.

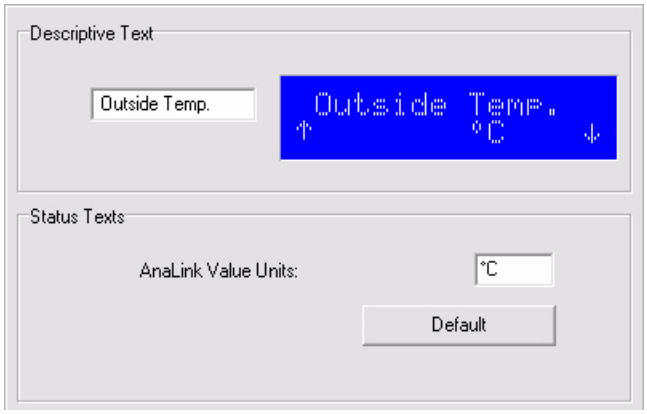
*Note:* If you want an analog value to be displayed, then the "Control Output" option must **not** be activated in ProLine or ProLine$^{NG}$.

### 3.6.3.3 Descriptive / Status Text in Display

| Display: | Descriptive Text - Status Text - Digital Value |
|---|---|




| Display: | Descriptive Text - Status Text - AnaLink Value |
|---|---|




In the "Display Settings" options window you determine the DRT display settings for the selected channel. These are normally independent from the selected channel type. The greenish display offers you a prior chance to check the appearance of the settings beforehand without having to download the configuration to the DRT.

You can use special characters in all the boxes; please refer to **Chapter 3.5.1 "General Information"** on **Page 15**.

***Descriptive Text***

Here you should enter a descriptive designation for the switched electric load or the displayed analog value. For this purpose the display provides space for 16 characters. To prevent confusion when leafing through the DRT at a later date you should avoid assigning the same designation several times over.

***Status Text***

The boxes for the "Status Texts" group are located in the bottom line of the DRT. All boxes are limited to four characters, but differ according to the selected data type:

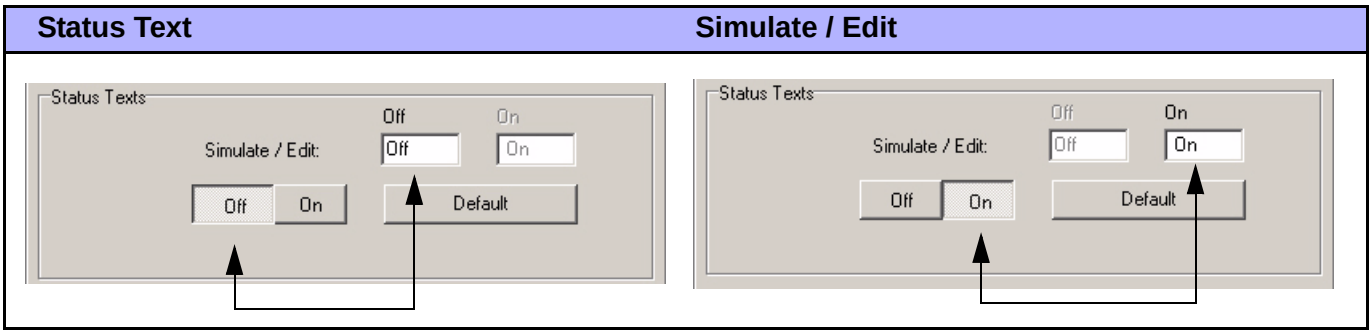
- Digital switching channel:

Here you can make two entries for the status values: the text for the channel status when switched on, and when switched off (normally "On" and "Off"). The DRT will always display only one of these entries in accordance with the current switching status of the channel.

- Digital shutter control channel:
  In this case the DRT will display both status texts simultaneously (normally "Up" and "Down") because the user can give the Up command with the left inside button and the Down command with the right inside button.
- Analog value:
  Here you can specify the unit appropriate for the displayed data. The DRT displays this unit to the right of the value.

**How is status text edited?**

In the case of units for an analog value it is quite clear: here there is only one input box. It is different for switching or shutter channels, for here you have two text boxes. To edit one of the two texts simply click with the mouse the relevant switch button to the left of the input boxes:




Switching over the status text will also change the display: DRTconf adopts the selected status text in the display and thereby simulates a change in switching status of a channel in the DRT.

***The "Default" switch button***

With this switch button it is a simple matter to get frequently used status texts inserted by DRTconf:

- For switching channels these are "On" and "Off";
- For shutter control channels these are "Up" and "Down";
- For light level channels it is "lux", and
- For other analog data it is "ºC".

You can always replace the automatically inserted texts.

## 3.6.4 Deleting a Channel

| | Menu | Keyboard |
|---|---|---|
| | ***<Edit><Delete>*** | **DEL** |

With this command you can delete entirely all data of an already configured channel. This means that all texts and event settings will be lost.

### 3.6.5 Moving Channels

| | Menu | Keyboard |
|---|---|---|
| | ***<Move Up/Down>*** | |

With this push button you may move up or down the currently selected channel (provided that the current position allows this).

*Tip:* You may also move the channels by „Drag-and-drop“: Therefor click on the channel and pull it to the desired position, keeping the mouse button pressed.

## 3.7 Reading Device Info, Reading and Writing a Configuration

### 3.7.1 General Information

In order to enable a data exchange between the text display and DRTconf, you require a connection from the PC (COM or USB port) and the DRT 2. Use the DDK 1 connecting cable (Order No. 09 501 129) and/or a USB-RS232 adaptor.

Once you have set up the connection, please select the relevant COM port in the ***<Options><Port>*** menu as described in **Chapter 4.2.2 "Setting Up the Communication Port"** on **Page 30** .

### 3.7.2 Reading Device Info

| | Menu | Keyboard |
|---|---|---|
| | ***<Display><Read Device Info>*** | **Ctrl+I** |

The device information displays the DRT operating system version and the current status.

**Device Information**

The **DRT Operating System Version** denotes the software state of the thermostat. The **Status bits** indicate the condition of the DRT - the figure "01", for example, indicates that the bus connection of the thermostat is functional.

### 3.7.3 Reading the Configuration

| | Menu | Keyboard |
|---|---|---|
| | ***<Display><Upload>*** | **Ctrl+U** |

With this command you can read the current configuration of the DRT. If there is no project, then the read channels will not be configured. Only the display settings will reflect the current settings in the DRT system menu.

You will, however, be requested to save the previous configuration if you have configured channels in DRTconf beforehand.

### 3.7.4 Writing the Configuration

| | Menu | Keyboard |
|---|---|---|
| | ***<Display><Download>*** | **Ctrl+D** |

With this command you can transfer your current configuration to the DRT. Please note that no further safety requests will be shown and that any existing configuration in the DRT will immediately be overwritten.

*Note:* Please ensure that neither the power supply nor the connection between DRT and PC can be disrupted during the transfer. A break in communication will result in an incorrect configuration.

You can, of course, always repeat the download after a disruption.

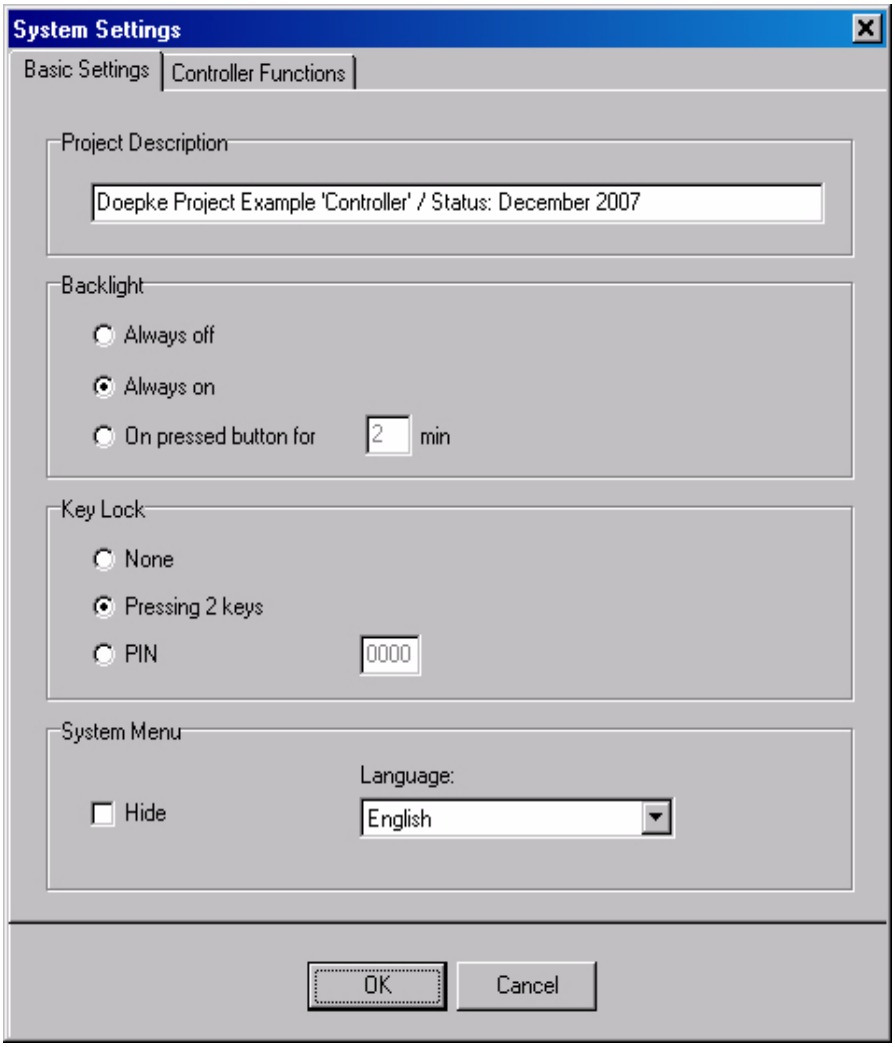
# Chapter 4 Settings

## 4.1 Display Settings

| | Menu | Keyboard |
|---|---|---|
| | ***<Display><Settings>*** | **Alt+Ctrl+S** |

Irrespective of the channels' representation, the DRT provides for several basic functions which can be changed - to some extent - via the system menu even after installing the DRT, but which can also be pre-set in DRTconf:

### 4.1.1 Basic Settings




***Project Description***

This box gives you the chance of entering a brief - up to 64 characters in length - description of the project, or of the installation location of the DRT so that you will be able to identify the project again later. The entered text will also be saved in the DRT when downloading the configuration.

***Background Light***

Here you can specify the operating mode of the background lighting:

| Background Light | |
|---|---|
| ***<Always Off>*** | The background lighting stays permanently off. |
| ***<Always On>*** | The background lighting stays permanently on. |
| ***<On Pressing Button>*** | The background lighting is switched on when one of the buttons on the front of the DRT is pressed, and automatically goes off again after the elapsed time specified in minutes. Permissible are the values from 1 to 20 minutes. |

*Note:* Due to the heat produced by the LEDs, the switching status of the background lighting has a significant influence on the correction value. This means that you'll have to re-adjust the correction value after approx. 30 min when you've changed the operating mode of the background lighting.

*Note:* DRT with blue display (starting with version 1.40) ignore the option ***<Always off>*** and instead of this switch on the lighting on pressed button.

***System Menu***

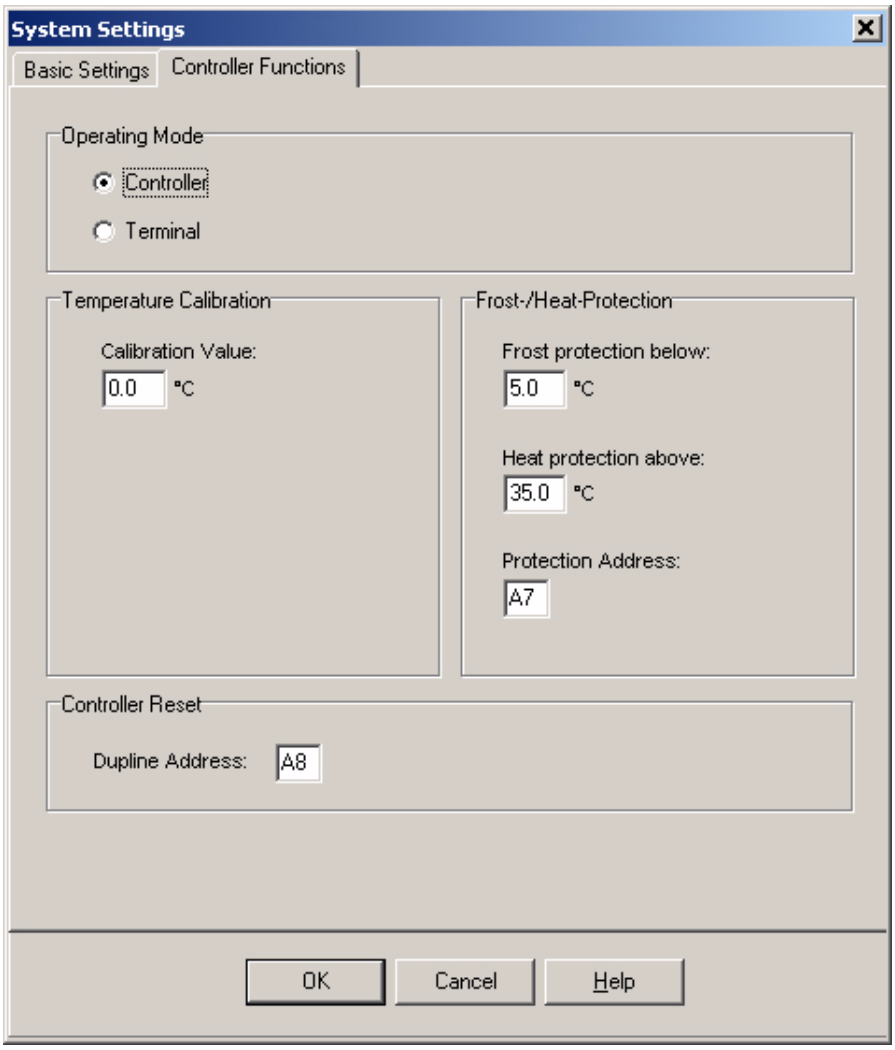
| System Menu | |
|---|---|
| ***<Hide>*** | When activating this option the system menu will not be accessible anymore - neither by clearing the key lock nor by entering a PIN. |
| ***<Language>*** | Here you can specify the language of the system menu in the DRT.<br>Ex-works, the DRT solely is equipped with the english version of the system menu. By specifying the corresponding language at this setting the menu language will be changed. |

***Key Lock***

The key lock option is intended to prevent unintentional operation of channels when contact with the DRT is made by accident.

| Key/PIN lock | |
|---|---|
| ***<None>*** | Neither the system menu nor digital channels are protected by an interlock. |
| ***<Pressing 2 keys>*** | The access to the system menu simply is protected by scanning two buttons (lower and upper right-hand buttons). Channels with activated option ***<Key-/PIN-Lock>*** are protected as well. |
| ***<PIN>*** | The operation of the system menu is protected by the request of a 4-digit PIN 4-stelligen PIN geschützt. Channels with activated option ***<Key-/PIN-Lock>*** are protected as well. |

### 4.1.2 Controller Functions




***Operating Mode***

| Operating Mode | |
|---|---|
| ***<Controller>*** | In the „Controller" mode the DRT 2 operates independently and controls the heating valve, or cooling unit, via Dupline channels in accordance with the set values. Based on the room temperature measured by the integral sensor, the 2-point thermostat triggers the channels for the heating or cooling signals so that the temperature of the room reaches the corresponding, manually selected set values. |
| ***<Terminal>*** | In the "Terminal" mode the thermostat simply measures the room temperature and transmits it, together with the desired temperature settings, to a superset control circuit. As neither the heating nor the cooling channels are being activated by the DRT 2, a superset control has to be programmed in such a way that it adjusts the temperature via heating valves or cooling units. |

***Temperature Calibration / Calibration Value***

The exact matching of the measured and the real room temperature is an important item concerning the correct functioning of the thermostat. Therefor it is necessary to run the DRT 2 at least 30 min in mounted condition. You obtain the correction value by subtracting the temperature displayed by the DRT 2 from the true room temperature value, preferably measured by means of a digital temperature sensor.

Example:

- Measured temperature: 21.5°C
- Temperature displayed by DRT 2: 24.5°C
- Correction value to be adjusted: -3.0 K (°C)

You may enter the correction value within the system menu of the DRT 2 directly - but it will be overridden when transferring a new configuration to the DRT. It is more reasonable to store the value directly in the system settings here.

***Frost/Heat Protection***

The frost/heat protection programme provides for the room temperature to be controlled at the outer temperature limits. Upon reaching the limits set via DRTconf, the thermostat will activate the relevant heating or cooling channel.

| Frost/Heat Protection | |
|---|---|
| ***<Frost protection below>*** | If the room temperature falls below the value specified here, the DRT automatically activates the channel for heating. |
| ***<Heat protection above>*** | If the room temperature passes over the value specified here, the DRT automatically activates the channel for cooling. |
| ***<Protection Address>*** | Enter here the address on which, if activated, the DRT solely executes the control of the room temperature according to the limits of heat/frost protection. Programmes like the night time lowering or comfort mode are overridden by this. |

***Controller Reset***

The thermostat can be returned to a defined initial status via the Dupline bus. When the relevant reset channel, entered in this field, is transmitted via Dupline, the thermostat discards almost all manually activated changes made hitherto and reloads the original configuration (default settings). An exception of this are all system settings, i.e. the temperature correction value, the key lock and the back lighting.

## 4.2 Programme Settings

### 4.2.1 Selecting the Language

| | Menu | Keyboard |
|---|---|---|
| | ***<Options><Language>*** | **Alt+Ctrl+A** |

DRTconf gives you the option of choosing between different languages. Such language setting becomes apparent in the menus, the help texts and the help file. If you click on Select Language, the following dialogue window will appear:

Please don't be surprised if this dialogue is always in English irrespective of the language you have selected. As many international users are familiar with English as the basic computer language, making the selection will be easier.

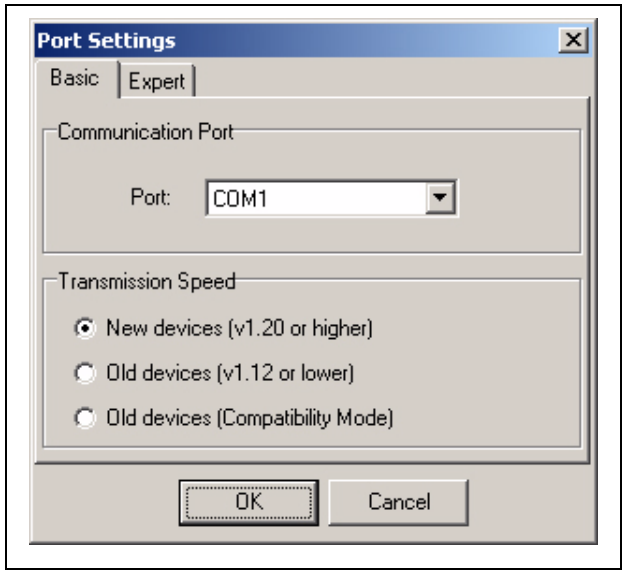
*Note:* The selection in this menu may vary, depending upon the translations already provided.

### 4.2.2 Setting Up the Communication Port

| | Menu | Keyboard |
|---|---|---|
| | ***<Options><Communication><Basic>*** | **Alt+Ctrl+O** |

With the exception of the communication port for the data transfer between DRTconf and DRT, all other parameters have been predefined so that you do not need to set these up.

You select the serial port of your PC via the ***<Options><Communication><Basic>*** menu item and the following dialogue window will appear:




| Basic Settings | |
|---|---|
| ***Communication Port*** | Choose here the communication port which you want to use for the transmission to the device.<br><br>*Note:* The list of available ports is compiled during the programme start-up. Any interfaces, such as e.g. the USB-RS232 adaptor, installed or added subsequently will only be recognized with the next programme start. |
| ***Transmission Speed*** | Due to compatibility reasons in conjunction with USB converters, a reduction of the transmission speed was necessary for DRT 2 starting with version 1.20.<br>DRTconf tests - starting with the current setting - all available speed settings, which may take some time. To shorten this process you also may identify the DRT 2's version (in it's system menu) and select the appropriate setting manually. You'll find a description for this in the operating manual. |

**Expert**

These settings are solely for tracing problems and should only changed in accordance with support personnel of Doepke. Therefor we don’t go into details concerning the choice of settings here.

# Appendix A  Configuration System

The following table illustrates the possible configurations of individual Dupline objects. Naturally, these are purely recommendations; we do not know how you want to use the functions, that has to be your own decision.

You are, of course, also free to select the text entries for the description, the status and the events. The texts given below are commonly used and are also programmed as defaults in DRTconf.

| Function | Do Not Display | Digital | | | | Analog | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Digital Value | Switching Channel | Shutter/Shutter Master | Allow Operation | AnaLink Value | Light level Function | Other | Sensor Input Range, Min. | Sensor Input Range, Max. | Status Channel "On" | Status Channel "Off" (Unit) |
| Blank | ☑ | | | | | | | | | | | |
| Blank, status signal | | ☑ | ☑ | | | | | | | | On | Off |
| Push-button function | | ☑ | ☑ | | ❶ | | | | | | On | Off |
| Push-button function, inverted | | ☑ | ☑ | | ❶ | | | | | | On | Off |
| Toggle function | | ☑ | ☑ | | ☑ | | | | | | On | Off |
| Timer | | ☑ | ☑ | | ❶ | | | | | | On | Off |
| Timer, Activation by Pulse | | ☑ | ☑ | | ☑ | | | | | | On | Off |
| Pulse generator | | ☑ | ☑ | | ❶ | | | | | | On | Off |
| (Real-)Time switch | | ☑ | ☑ | | ☑ | | | | | | On | Off |
| Master function | | ☑ | ☑ | | ☑ | | | | | | On | Off |
| Thermostat | | ☑ | ☑ | | ☑ | | | | | | On | Off |
| Night set-back | | ☑ | ☑ | | ❶ | | | | | | On | Off |
| Synchronization signal | ☑ | | | | | | | | | | | |
| Motion / Proximity Detector | | ☑ | ☑ | | ❶ | | | | | | On | Off |
| Counter | ☑ | | | | | | | | | | | |
| Time display | ☑ | | | | | | | | | | | |
| Multiplex channel | ☑ | | | | | | | | | | | |
| Shutter control | | ☑ | | ☑ | ☑ | | | | | | Up | Down |
| Shutter master | | ☑ | | ☑ | ☑ | | | | | | Up | Down |
| **Analog Sensors** | | | | | | | | | | | | |
| Sensor with control output | | ☑ | ☑ | | | | | | | | On | Off |
| Temperature sensor | | | | | | ☑ | | ☑ | ❷ | ❷ | | °C |
| Light level sensor | | | | | | ☑ | ☑ | | ❸ | ❸ | | lux |
| Wind sensor | ☑ | | | | | | | | | | | |

| Function | Do Not Display | Digital | | | | Analog | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Digital Value | Switching Channel | Shutter/Shutter Master | Allow Operation | AnaLink Value | Light level Function | Other | Sensor Input Range, Min. | Sensor Input Range, Max. | Status Channel "On" | Status Channel "Off" (Unit) |
| Measuring device | | | | | | ☑ | | ☑ | ❷ | ❷ | | ❷ |
| **ISA Alarms** | | | | | | | | | | | | |
| NCC/NOC | | ☑ | ☑ | | ❶ | | | | | | On | Off |
| Acknowledgement | | ☑ | ☑ | | ☑ | | | | | | On | Off |
| Reset | | ☑ | ☑ | | ☑ | | | | | | On | Off |
| Lamp test | | ❶ | ❶ | | ❶ | | | | | | On | Off |
| Siren | | ☑ | ☑ | | | | | | | | On | Off |
| **Smoke Alarm** | | | | | | | | | | | | |
| NCC/NOC | | ☑ | ☑ | | ❶ | | | | | | On | Off |
| Reset | | ☑ | ☑ | | ☑ | | | | | | On | Off |
| Siren/alarm signal | | ☑ | ☑ | | | | | | | | On | Off |
| **Intruder Alarm** | | | | | | | | | | | | |
| NCC/NOC | | ☑ | ☑ | | ❶ | | | | | | On | Off |
| Enable by code lock | | ☑ | ☑ | | ☑ | | | | | | On | Off |
| Enable by switch | | ☑ | ☑ | | ☑ | | | | | | On | Off |
| Enable by oush button | | ☑ | ☑ | | ☑ | | | | | | On | Off |
| Siren/alarm signal | | ☑ | ☑ | | | | | | | | On | Off |
| **Water Alarm** | | | | | | | | | | | | |
| NCC/NOC | | ☑ | ☑ | | ❶ | | | | | | On | Off |
| Reset | | ☑ | ☑ | | ☑ | | | | | | On | Off |
| Siren/alarm signal | | ☑ | ☑ | | | | | | | | On | Off |
| Common Siren | | ☑ | ☑ | | ❶ | | | | | | On | Off |

☑ This option can be utilized.

❶ Although user-operation of this channel is possible, it makes little sense in most cases.

❷ The measuring input range depends upon the sensor used. Dupline temperature sensors frequently operate within -30ºC to +60ºC or from -10ºC to +100ºC.

❸ The measuring input range of the light sensor is automatically set from 0.1 to 100,000 lux.

# Index

**A**

Abbreviations ... 2
Address
  Display/Operation ... 19
Align left ... 15
Align right ... 16
AnaLink value ... 20
Analog sensors ... 32
Analog value
  Light level sensor ... 20
  Other ... 20

**B**

Background light ... 27

**C**

Calibration value ... 28
Center ... 16
Channel order ... 23
Channels
  Changing order ... 23
  Deleting ... 22
  Protecting ... 27
Comfort Setting ... 7
Communication
  Disruption ... 25
  Port set up ... 30
Compatibility ... 1
Configuration
  AnaLink value ... 20
  Analog value ... 20
  Read ... 24
  Table of objects ... 32
  Write ... 25
Controller
  Operating mode ... 28
Conventions ... 1
Copying ... 15
Cutting ... 15

**D**

Date/Time of transfer ... 14
Default (status texts) ... 22
Descriptive text ... 21
Device info ... 24
dimmers ... 19
Display
  Download ... 25
  Read device info ... 24
  Settings ... 26
  Upload ... 24
DRT
  Operating system version ... 1, 24
  Reading configuration ... 24
  Settings ... 26
  Status ... 24
  Writing configuration ... 25
DRTconf
  Exit ... 11
  Starting ... 10
  Version compatibility ... 1
  What is DRTconf? ... 1

**E**

Edit
  Align left ... 15
  Align right ... 16
  Center ... 16
  Copy ... 15
  Cut ... 15
  Delete channel ... 22
  Paste ... 15
Exit ... 11

**F**

File
  Exit ... 11
  New ... 13
  Open ... 13
  Print ... 14
  Properties ... 14
  Save ... 13
  Save as... ... 13
Formatting text ... 15
Frost protection ... 29

**H**

Heat protection ... 29
Help ... 12
  Help to DRTconf ... 12
  Info ... 12
Help system ... 12
Hiding system menu ... 27

**I**

Info ... 12
Input range (sensors) ... 20
Intruder alarm ... 33
ISA alarms ... 33

**K**

Key/PIN lock ... 3, 4
  Basic setting ... 27
  Digital channels ... 19

**L**

Language
  DRT system menu ... 27
  DRTconf programme language ... 29

Selecting ..... 29
Light level sensor ..... 20

**M**

Max value ..... 20
Min value ..... 20

**N**

Night-Time Lowering ..... 6

**O**

Objects
Comfort (Party) Setting ..... 7
Configuring ..... 17
Definition ..... 2
Night time lowering ..... 6
Room temperature ..... 6
Set value cooling ..... 6
Set value heating ..... 6
Thermostat inhibit ..... 6
Operating Mode
Thermostat/Terminal ..... 28
Operating system ..... 24
Options
Communication ..... 30
Language ..... 29
Other (Analog value) ..... 20

**P**

Party Setting ..... 7
Pasting ..... 15
Printing files ..... 14
Programme
Construction ..... 11
Settings ..... 29
Project description ..... 26
Properties of files ..... 14
Protection (frost/heat) ..... 29
Protection address ..... 29

**Q**

Quick Start ..... 3

**R**

Requirements ..... 1
Reset (controller operating mode) ..... 29
Room temperature display ..... 6

**S**

Sensor
Analog ..... 32
Input range ..... 20
Set Value
Cooling ..... 6
Heating ..... 6
Settings
Basic settings of DRT ..... 26
DRT system language ..... 27
Programme language ..... 29
Shutter/shutter master ..... 18
Simulate/edit ..... 22
Smoke alarm ..... 33
Starting ..... 10
Status ..... 24
Status text ..... 21
Switching channel ..... 18
System menu
Hiding ..... 27
language ..... 27
System requirements ..... 1

**T**

Temperature calibration ..... 28
Terminal operating mode ..... 28
Terms ..... 2
Texts
Align left ..... 15
Align right ..... 16
Center ..... 16
Copying ..... 15
Cutting ..... 15
Pasting ..... 15
Thermostat ..... 32
Inhibit ..... 6
Operating mode ..... 28
Reset ..... 29
Timer ..... 32

**V**

Version ..... 1
Configuration file ..... 14
DRTconf ..... 12

**W**

Water alarm ..... 33

**Doepke**

Schaltgeräte GmbH & Co. KG
Stellmacherstraße 11
26506 Norden
Telefon: +49 4931 1806-0
Telefax: +49 4931 1806-101
E-Mail: info@doepke.de
www.doepke.de

Artikelnr. 59 00 xxx